

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 57192926  
PUBLICATION DATE : 27-11-82

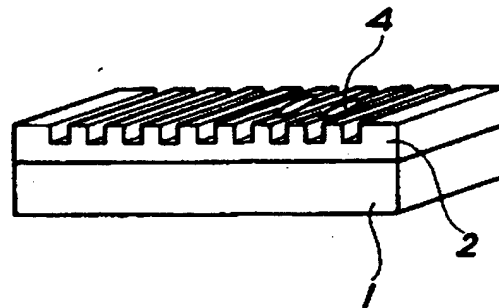
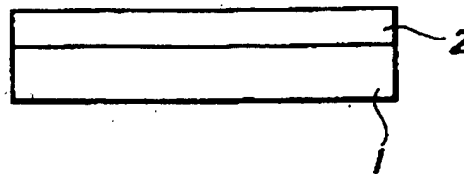
APPLICATION DATE : 25-05-81  
APPLICATION NUMBER : 56078906

APPLICANT : SEIKO EPSON CORP;

INVENTOR : AKIYAMA MASAYUKI;

INT.CL. : G02F 1/133 G09F 9/00

TITLE : LIQUID CRYSTAL DISPLAY DEVICE  
AND ITS ORIENTATION PROCESSING  
METHOD



ABSTRACT : PURPOSE: To control optional orientation of liquid crystal molecules by forming an inorganic or organic layer composed of a groove forming agent on a base plate and pressing a pressing means with projections or grooves on the layer.

CONSTITUTION: In case of the production of a liquid crystal display device, a layer 2 of groove forming agent is formed on a base plate 1 of the liquid crystal display device at first. The groove forming agent is composed of single or plural inorganic compounds such as SiO and SiO<sub>2</sub> and organic compounds such as polyvinyl alcohol, polyimide, polyamide, cellulose, cellulose acetate, "Teflon," nylon, acrylate, and styrene. Then a grooved press mold 3 is pressed on the layer 2 of the image forming agent to form liquid crystal molecule arraying grooves on the layer 2, so that the liquid crystal molecules 4 are arrayed along the grooves. For a material of the press mold, metal such as Fe, Ni, Cu, and Al or inorganic materials such as glass and ceramic are used.

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